

FHWA ER Example Problem

A magnitude 7.9 earthquake has hit California on November 3, 2002. There is extensive damage on a number of roads in the Los Angeles region. You have been assigned to one of six Damage Assessment Form teams to help record damage eligible from the declared disaster. Use the following information and pictures of a typical site to complete the attached Damage Assessment Form (DAF).

General Information:

Disaster #: CA03-1

Location: SR74, PM 3.4 to 3.5

Caltrans Work Order #: 196620

Federal-Aid Highway, Map #U14

Traveled Way: 11' AC

Traveled Shoulder: 4' Gravel

ADT: 1,200

Type of Repair: State Forces for EO work and Contract for PR work

Damage: Roadway failure due to earthquake (500' x 15' x 10')

Stewardship: Exempt

Detailed Work (Use these and other items for EO and/or PR as applicable):

Traffic Control

Drainage

Subbase, Base and AC

K-rail

Mitigation

Base Material & Temporary AC

Retaining Wall

Guardrail

Landscaping

Temporary Signal

R-O-W

U.S. Department of Transportation Federal Highway Administration - California Division Damage Assessment Form (DAF) - Title 23				Report No. K J K - C T 0 7 - 0 0 1 - 0				
Sheet No. 1 of 3				Disaster No. CA 0 3 - 1				
Applicant <div style="text-align: center;">Caltrans</div>		County <div style="text-align: center;">LA</div>		Inspection Date (mm/dd/yy): <div style="text-align: center;">11/10/02</div>				
Location of Damage Name of Road/Bridge SR74 Begin 3.4 End 3.5 PM Caltrans Work Order No(s): 196620				Federal-Aid Highway? <input checked="" type="checkbox"/> Yes (if no, ineligible for ER) Map No. U 1 4 Forest Highway System? <input type="checkbox"/> Yes (Possible ERFO) Hwy. No. State/Local Route No. <div style="text-align: center;">SR74</div>				
Road/Bridge Data		Bridge No.		Type				
Traveled Way:		Width 11'		Type (circle one)		PCC / / Gravel		
Shoulder:		Width 4'		Type (circle one)		PCC / AC /		
Description of Damage: <div style="text-align: center;">Roadway failure due to earthquake (500'x15'x10').</div>				ADT (Existing) <div style="text-align: center;">1,200</div>				
				Photos Roll # 2 Picture # 5 & 6				
COST ESTIMATE								
Emergency Opening	Type of Repair		Description of Work			Summary Cost		
	EMERGENCY OPENING (EO) TO DATE <input checked="" type="checkbox"/> State Forces <input type="checkbox"/> Local Forces <input type="checkbox"/> Contract		Traffic control, K-rail, Temporary Signal, Base Material & Temporary AC.			\$53,605		
	EMERGENCY OPENING (EO) WORK REMAINING <input type="checkbox"/> State Forces <input type="checkbox"/> Local Forces <input type="checkbox"/> Contract							
			Subtotal Emergency Opening			\$ 53,605		
Permanent Restoration	PERMANENT RESTORATION (PR) Recommended Method of Work:		Subbase, Base and AC, Drainage, Retaining Wall, Guardrail, Landscaping, Mitigation.			\$284,000		
	<input type="checkbox"/> State Forces <input type="checkbox"/> Local Forces <input checked="" type="checkbox"/> Contract							
NOTE: PRIOR AUTHORIZATION (APPROVED FNM-76) IS REQUIRED TO PROCEED WITH PERMANENT RESTORATION					Subtotal Permanent Restoration		\$ 284,000	
Environmental Clearance:		<div style="display: flex; justify-content: space-around;"> EO PR </div>		Preliminary Engineering (10% of PR) Construction Engineering (15% of PR) Right-of-Way			\$ 28,400 \$ 42,600 \$ 2,000	
Categorical Exclusion X Further Environmental Study EO Clearance signature/date: John Doe 11/10/02		Environmental clearance is conducted through normal Fed.-aid project procedures.						
Stewardship:				TOTAL ESTIMATED COST (EO+PR+PE+CE+R/W)		\$ 410,605		
Recommendation: <input checked="" type="checkbox"/> Eligible <input type="checkbox"/> Ineligible				FHWA Engineer*		Date		
Concurrence: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				State Engineer		Date		
Concurrence: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Local Agency Engineer		Date		

Original: Caltrans District Copies: FHWA, Division of Local Assistance (local roads), Federal Resources (state hwy), HA23 Coordinator. (state hwy)

*Write "N/A" in FHWA signature block if the project has no Federal ER funding (state-only emergency) or Federal ER funding (delegated down to the State).

U.S. Department of Transportation Federal Highway Administration California Division Damage Assessment Form (DAF) Title 23, Federal-Aid Highways			Report No. <u>KJK-CT07-001-0</u> Sheet No. <u>2</u> of <u>3</u> Applicant <u>Caltrans</u>	
Quantity	Unit	Labor, Materials, and Equipment	Unit Price	Cost
LS	1	Traffic Control	\$8,000	\$8,000
30	Each	K-rail	\$50	\$1,500
3000	Cu Yd	Base Material	\$10	\$30,000
3	Ton	Temporary AC	\$35	\$105
2	Each	Temporary Signal	\$7,000	\$14,000
1	LS	Drainage	\$1,000	\$1,000
3000	Cu Yd	Subbase	\$5	\$15,000
3000	Ton	Base	\$10	\$30,000
100	Ton	AC	\$440	\$40,000
1	LS	Retaining Wall	\$150,000	\$150,000
700	Ln. Ft.	Guardrail	\$50	\$35,000
1,000	Sq. Ft.	Landscaping	\$3	\$3,000
1	LS	Mitigation	\$10,000	\$10,000

U.S. Department of Transportation

Federal Highway Administration
California Division

Damage Assessment Form (DAF)
Title 23, Federal-Aid Highways

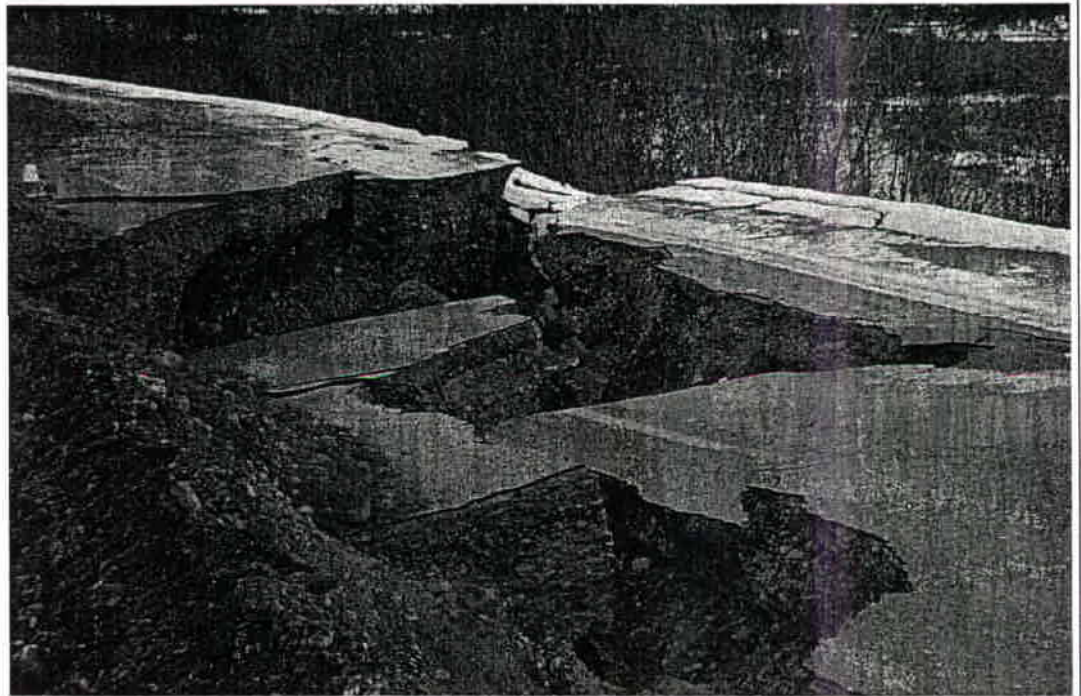
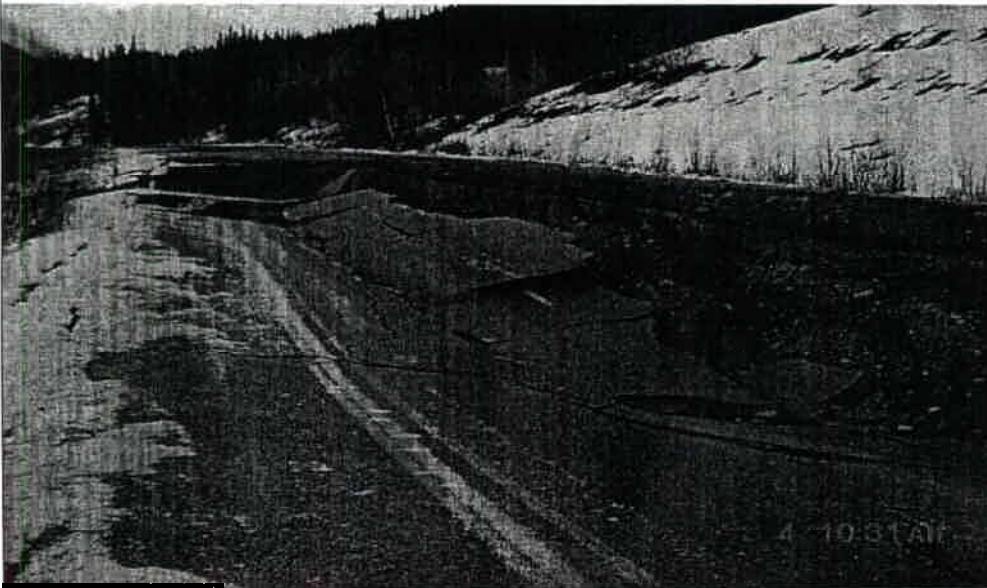
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Sheet No. 3 of 3

Applicant

Caltrans

Sketches and/or Narrative



Miscellaneous FHWA Approvals

Reflects available information for contracts at the time of DAF preparation. A revised DAF is not required for changes – use normal Federal-aid procedures to adjust for changes with approval (per Stewardship) based on documented justification.

Describe: